

information for the parents/adopters about child home safety (OR = 0.56; 95% CI: [0.38–0.82], $p = 0.0001$) and the risk to cut/prick is smaller if sharp things are out of reach of children (OR = 0.6; (95% CI: [0.46–0.80]; $p = 0.0001$).

Conclusions The prevalence of home injuries among children under five was 64,3%. 2) The most common injuries are fall, cut/prick, burn/scald and choking/suffocation. 3) Most often injuries occur then child are supervised by an adult. 4) Storage of sharp things out of reach of children and enough information for parents/adopters about home safety are preventive factors. Letting children play in the yard/playground, to use kitchen appliances, to play with pets without adult supervisions are home injuries risk factors.

238 WATER HEROES – WATER SAFETY SKILLS FOR KIDS

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Background Water is a big part of the life style in Finland, “the land of a thousand lakes”. The geographical and cultural features motivate the Finns to learn to swim. However, the statistics on causes of death reveal that among children (0–17) in Finland, drownings are the second largest group among fatalities due to accidents (Finnish Safety Investigation Authority 2012). The project “Water Heroes” was created for children, teachers and parents to help them to enjoy swimming and other water activities in a safe way.

Objective The three year project Water Heroes was launched in 2015. Its main goals are 1) to distribute information and inspire children and young people to spend time in and around water in a safe way, 2) to create a teacher handbook including different indoor and out-door models for the teacher to carry out various activities in conjunction with different school topics, 3) to advise parents on how to support their children in learning swimming and other water related skills safely. The project is led by the Finnish School Sport Federation and financed by Reijo Rautauoma Foundation.

Results During the first year, the project reached almost 3000 children and their teachers during the tour that stopped in five cities. In Helsinki the event was part of the European Week of Sport. Feedback from the participants has been positive and teachers found the events useful. Project has also received media attention. The experiences from the first events will be used to develop project activities and materials in the future. An online handbook for teachers will be published in the beginning of 2016.

Conclusions It is important to have different kind of strategies to tackle the drowning problem as well as to promote water activities in a safe way. Action-based projects seem to work well with school children. In addition, the learning-by-doing – model supports well the new fundamentals of Physical Education 2016, issued by the Finnish National Board of Education.

239 SURVEILLANCE OF TOXIC EXPOSURES TO LIQUID LAUNDRY DETERGENTS IN PODS IN ITALY

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Background Previous investigations have shown that liquid laundry detergents in pods have the potential to cause corrosive eye damages, pulmonary toxicity and serious laryngopharyngeal injuries. In Italy, different actions had been undertaken to prevent hazardous exposures in young children. The present study is mainly aimed at providing a preliminary evaluation of impact of these preventive measures.

Methods Exposures to laundry detergents involving children aged <5 years occurred during 2010–2014 were extracted from the National Poison Control Centre in Milan (NPCCM). The main characteristics of cases exposed to the two main categories of laundry detergents, i.e., liquid laundry detergents in pods (LDPs) and traditional laundry detergents (TLDs) were compared by means of Pearson’s X^2 test or Fisher’s exact test. The mean daily number of exposure to main category of laundry detergents by month and year, and quantity of LDPs sold by month and company, i.e., MC and OCs, as provided by industry, were used to calculate exposure rates, i.e., number of cases exposed to LDPs/millions of units sold/month by year and company. Change-point analysis was used to determine significant changes in exposure occurrence during the study period. A change was considered significant when the level of confidence that the change actually occurred was 95% or higher, as estimated by bootstrapping technics. Significant change points were used to define pre- and post-change point periods.

Results In comparison to cases exposed to TLDs ($n = 1,203$) those exposed to LDPs ($n = 1,551$) were more frequently treated at an hospital (68% vs 41%, $p < 0.001$), and suffered moderate/high severity clinical effects (13% vs <1%, $p < 0.0001$). During the study period, the number of cases exposed to pods changed from an average of 1.3 cases/day, observed in September 2010–November 2012, to an average of 0.6 cases/day, observed in December 2012–December 2014. The observed change was specifically driven by products from a major company whose average rates were 2.10 cases/million units sold before December 2012, and 0.97 cases/million units sold in the following period. The rate change occurred four months after this company started selling its brands in obscure outer-packaging.

Conclusions The present study indicates that reducing visibility of LDPs could be associated with about a 50% decrease of incidents among young children. However, considering that these products are strongly associated with severity of poisoning, further efforts should be devoted to prevent hazardous exposure and reduce the intrinsic toxicity of mixtures in pods.

240 CHILD POISONING RISK DURING MATERNAL DEPRESSION AND ANXIETY EPISODES: SELF-CONTROLLED CASE SERIES

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Background There is a paucity of literature investigating the association between maternal mental health and child injury risk, with many potential confounders difficult to measure and adjust for (e.g. supervision, safety practices). Using a self-controlled case series (SCCS), a within person design where individuals act as their own control, we aimed to investigate the temporal association between child poisoning rates and episodes of maternal depression and anxiety.

Methods Using a cohort of 209,418 mother-child pairs from England who had linked primary care and hospitalisation data from the Clinical Practice Research Datalink and Hospital Episode Statistics, we conducted a SCCS analysis of 2,646 children aged 0–4 who had one or more recorded poisoning between 1997 and 2014. Conditional Poisson regression was used to estimate incidence rate ratios (IRR) for child poisonings during medicated and unmedicated maternal depression and anxiety periods.

Results Child poisoning incidence was higher but IRRs were not significant in the 60 days before depression and/or anxiety episodes compared with well periods. There was no significant increase in poisoning risk during episodes of maternal depression (IRR 1.11, 95% confidence interval 0.73–1.69), depression with anxiety (1.19, 0.71–1.97), or anxiety (1.19, 0.61–2.31) when the mother was not prescribed medications for these conditions. Poisoning risk was however significantly elevated during periods of maternal depression treated with medication, with a 43% higher poisoning rate compared to well periods (1.43, 1.14–1.81).

Conclusions For children who experienced a poisoning, poisoning risk was increased during periods when the mother was treated with medications for depression compared to periods when the mother was well. This finding may reflect that periods of depression treated with medication may be more severe, but does support the need for preventative interventions to ensure safe medication storage and use.

241 ATLAS AND DASHBOARD OF CHILD AND YOUTH INJURY PREVENTION

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Background Visual Analytics (VA) is defined as ‘the science of analytical reasoning facilitated by interactive visual interfaces’. An interactive VA system helps users make sense of complex and massive data and supports decision-making. The goal of this project was to develop an interactive web-based child and youth injury Atlas and Dashboard and populate it with existing and novel research data from the CIHR Team in Child and Youth Injury Prevention. The aim was to assist injury professionals, practitioners and policy makers to make informed and timely decisions and take action to improve child and youth injury prevention in Canada.

Methods/description of the problem Broad input from the injury prevention community in Canada was sought to finalise the operational requirements for the Atlas and Dashboard. This took place at several time points: 1) the early stages of development to

inform the initial mock-up of the site, 2) once the data visualisations were created to determine if they were useful to users, 3) near completion of the site to obtain feedback on usability from the target audience. Visual Interaction Methodology, which helps users derive insights, acquire knowledge and optimise site use, was used to help stakeholders explore and analyse complex data.

Results Provincial level child and youth injury mortality, hospitalisation, drowning and transport data were made available to users in two different formats: 1) interactive data visualisations of injury trends and patterns, 2) user defined outputs from selectable menus allowing users to sort, view and query injury data. Injury professionals, practitioners and policy makers informed the look, feel and function of the site and provided feedback that improved the user experience.

Conclusions The Atlas and Dashboard integrates an interactive VA system into a website for child and youth injury prevention aimed at injury professionals, practitioners and policy makers in Canada.

242 30 YEARS INJURY SURVEILLANCE IN HARSTAD, NORWAY: A BURN PREVENTION PROGRAM FOR CHILDREN 0–4 YEARS

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Background May 1985, injury surveillance was initiated at Harstad Hospital. Coding was done by the Nordic system for upstream variables. Data from 1985–86 (baseline) showed high thermal burn risk in children 0–4 years old. The consumption of hospital resources for treatment was also high, particularly for scalds in terms of grafting, hygienic precautions, treatment infections and support for patients and parents.

Methods Quasi-experimental design. Harstad (main intervention), six surrounding communities (intervention diffusion) and Trondheim (reference). Based on data on where, when and how injuries occurred, prevention was targeted with a mix of passive and active strategies. Participants interventions: e.g. public health nurses, plumbers, electric appliances stores, politicians, media and the hospital. Scalds caused the most serious burns and were prevented by lowering tap water temperature, installing cooker safeguards and informing parents through home visits and regular health checks for 0–4 children (four yearly).

Results After 10 years burn rates decreased from baseline by 51.5% ($p < 0.05$) in Harstad and 40% in the six municipalities (n.s.) Rates in Trondheim increased by 18.1% (n.s.). Long term results: The rate scalds/contact burns decreased gradually during 30 years. The serious scalds from receptacles with boiling foodstuff pulled down from the stove were mostly eliminated. Mean yearly hospital bed consumption for burns in children 0–4 years from Harstad and the six communities was 26.8 during 1985–94 and 2.1 during 1995–2014. During the last two decades, asylum seekers were overrepresented.

Conclusions Programs targeting burns in children can be effective and sustainable. Local injury data provided stimulus for community action.